

in their oviducts. Therefore, the eggs are probably deposited in late January or February. The clutch size was either 3 or 4 in the six gravid females examined. In my sample, 64-68 mm. snout-vent length hatchlings first appear in March, but one 66 mm. juvenile was collected in the Tanami desert in June. The smallest specimen collected during July through February measures 80 mm. snout-vent, suggesting fairly rapid early growth of the hatchlings. Polymodal analysis of the snout-vent length frequency distribution (Figure 4) by the method outlined by Cassie (1950, 1954), shows six size groups, which could well represent year classes.

ACKNOWLEDGEMENTS

Museum curators H. G. Cogger, J. M. Dixon, F. J. Mitchell, and G. M. Storr either provided locality data or access to the collections under their care. My wife, Helen, observed and collected many of the specimens and read the manuscript critically. Funds for this study were granted by the U.S. National Institute of Health and National Science Foundation.

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FROM FIELD AND STUDY

Nesting of the Red-tailed Tropic-bird at Sugarloaf Rock, near Cape Naturaliste.—Suggestions that the Red-tailed Tropic-bird (*Phaethon rubricauda*) might nest on Sugarloaf Rock, one mile south of Cape Naturaliste, were made by V. N. Serventy (*W. Aust. Nat.*, 9, 1965: 171). Subsequently Ted Watts and I (*W. Aust. Nat.*, 10, 1967: 122) proved that nesting did occur; we found at least four pairs nesting on the Rock on January 27, 1967. In the summer of 1967-68 evidence was obtained that the nesting group on this Rock had expanded considerably.

A visit on Christmas Day, 1967 showed that eight birds were sitting and nine others were circling overhead. On January 28, 1968 a party (J. Shanks, G. Chester, D. Forbes and myself) ascended the Rock to band the nesting birds. Altogether 14 nests were found and 14 adults were banded, with an additional 10 the

following day when two more nests were located. In two of these nests the birds had not yet laid.

On February 7, 1968 Dr D. L. Serventy drove G. Chester and me to the Rock. Four more adults were banded and two chicks which were hatched since the previous visit.

I had to return to New South Wales soon after, but to complete observations on the current season the Rock was revisited by G. Chester, D. and S. Forbes and I. Reynolds on April 7—53 days after the previous visit. There were eight nests with chicks (all banded), five nests with eggs and four empty nests. Among these were two nests not noted previously—each had an adult with an egg. Four of the other nests were being used by birds other than those recorded on them previously. Four more adult birds were also banded.

Remains of fish at the nest were collected and submitted to Mr R. J. McKay, of the W.A. Museum, for identification. He reported that they were of two species—*Scomberesox forsteri* (the specimen would have measured approximately 310 mm. in total length when alive) and *Hemirhamphus* sp. (possibly *H. melanochir*, a female in roe, of a possible total length exceeding 300 mm.).

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Some Records of Palaearctic Waders in Western Australia*—

The published observations on migrant Palaearctic waders in Western Australia are still rather scanty. During the fourth phase of the Harold Hall Australian Expedition to Western Australia, in the first half of 1966, some random observations were made during visits to appropriate localities. Since these observations may add to existing information and give a more balanced picture of wader distribution, they have been brought together here. Apart from providing additional records of rarer species they also indicate that a number of these birds are present at a period when breeding birds would already have left for the Eurasian regions, as, for example, in the numbers seen at Nickol Bay in early June, the majority of these birds being in non-breeding plumage.

In the following notes we have omitted any reference to endemic wader species which were also recorded at the time. The greater part of these observations were made by P. R. C. who, in addition to considerable experience of wader observation in the western Palaearctic, had also had the opportunity to study the Australian waders during an earlier expedition.

ALBANY. 25th March—1 Marsh Sandpiper (*Tringa stagnatilis*), 1 Greenshank (*T. nebularia*), 4 Wood Sandpipers (*T. glareola*).

NEWDEGATE. 15-20th April—5 Greenshanks on pool in mallee.

NICKOL BAY, ROEBOURNE. 3rd June—High tide assembly on rocky beach—20 Grey-tailed Tattlers (*Tringa brevipes*), 500+ Bar-tailed Godwits (*Limosa limosa*), 6 Black-tailed Godwits (*L. lapponica*), Eastern Curlews (*Numenius madagascariensis*) (present, number not recorded), Whimbrels (*N. phaeopus*) (numerous, one flock of 25 noted resting together), 7 Turnstones (*Arenaria interpres*), Greenshanks (several, numbers not recorded). Two Marsh Sandpipers on a shallow lagoon on shoreward side of mangroves. In addition a mixed flock of c. 500 small waders present on the mud as the tide receded included 10-15 Large Sand Dotterels (*Charadrius leschenaultii*), and small groups of Stints (probably Red-

*Results of the Harold Hall Australian Expedition. No. 13.